

## **ABSTRACT OF THE DISCLOSURE**

The present invention relates to cord blood stem cell systems, methods, and products for delivering tissue-matched stem cells derived from a single cord blood source, for use in transplantation. The cord blood stem cell system standardizes, customizes and integrates cord blood-derived stem cell expansion to produce progenitor cells to treat hematological and other diseases. The system integrates the production of patient-matched stem cells so that the patient's physician may order the biological product and receive customized cord blood-derived stem cells as an approved biologic ready for transplantation and capable of long term engraftment.